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EXAMINER

WONG, WARNER

ART UNIT	PAPER NUMBER
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2616

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01/22/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/066,248

Applicant(s)

SEMPER, WILLIAM JOSEPH

Examiner

Warner Wong

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 21-22, 24-25, 28 and 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable by Rezaiifar (6,167,270) in view of Iguchi (US 2002/0147020).

**Regarding claims 21 and 28**, Rezaiifar describes an apparatus/method in a wireless network communications system, comprising:

a source base station (BS) in communicating with a mobile station MS and a target [base] station (fig. 1 & 5, and col. 13, lines 12-25 and col. 14, lines 14, lines 50-67, where BS 4d (source BS) communicates with a MS 6i and to BS 4e (target BS) via the BSC regarding intercell delta power levels for a supplemental channel soft handover);

said target BS in communication with said source BS and said MS ((fig. 5A & 5B and col. 13, lines 12-25 and col. 14, lines 14, lines 50-67, where BS 4e communicates with MS 6i and to BS 4d via the BSC when in a soft handover from BS 4e to BS 4d);

said source BS configured to generate a handoff message containing supplemental channel configuration information about said supplemental channel being used by said mobile station (fig. 1 & 5, col. 13, lines 21-25 and col. 14, lines 50-64, BS 'A' (source BS) hands off the supplemental channel transmission/call to BS 'C' (target

BS) in accordance to the inter-cell delta power levels (handoff required message) forwarded (generated) by the base stations 4 to the BSC 10, including the source base station. In addition, Rezaiifar incorporates by reference US 5,903,554 which incorporates by reference US 5,101,501, "Method and System for Providing a Soft Handoff in communication in a CDMA Cellular Telephone System", col. 8, lines 35-46, which describes that a control message is sent by a mobile to the current cell site, then to a BSC for a mobile-initiated handoff to other cells 12 or 14);

Rezaiifar fails to explicitly describe that the inter-cell delta power message being a "handoff required" message.

However, it is obvious that each the messages, including the inter-cell delta power message, as described in Rezaiifar reference are needed (required) for the SCH soft handoff; they are not optional messages. Hence the "handoff message" of Rezaiifar is a "handoff required" message.

Rezaiifar fails to describe:

said target base station is configured to determine whether said target base station is able to support said high speed packet data call based on said supplemental channel configuration information, and

wherein said source base station is further configured to hand off said high speed packet data call on said supplemental channel to said target base station during said high speed packet data call subsequent to said target base station determining that said target base station is bale to support said high speed packet data call.

Iguchi describes:

said target base station is configured to determine whether said target base station is able to support said high speed packet data call based on said supplemental channel configuration information (para. 87-88 & 97-99, BTS 3 (target BS) determines the set (support) rate  $Y$  ( $\leq$  requested Sch rate  $X$ ) within the handoff resource response in the F-Sch setup).

wherein said source base station is further configured to hand off said high speed packet data call on said supplemental channel to said target base station during said high speed packet data call subsequent to said target base station determining that said target base station is able to support said high speed packet data call (para. 98-99, when  $Y=X$ , BTS 2 (source BS) is hand off the full Sch to BTS 3 (target BS)).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to have the target BS determine if high speed packet data call is supported and subsequently the call is transferred from the source BS to the target BS as in Iguchi for the system of Rezaiifar.

The motivation for combining the teachings is that it allows a method to determine the Sch bandwidth supported during a Sch handover (Iguchi, para. 10).

**Regarding claim 22**, Rezaiifar further describes the source BS handing off said high speed packet data HSPD call on said supplemental channel to said target BS, and the target BS receives the high speed packet data call on the supplemental channel handed off from the source BS (fig. 5B, where BS 'A' hands off supplemental channel to BS 'C', the supplemental channel containing HSPD as described in col. 13, lines 22-25).

**Regarding claims 24, 30 and 32**, Rezaiifar further describes that the source/target BS (fig. 2, #4) comprises a [first] packet data handoff controller (fig. 2, #44,46).

Rezaiifar fails to describe that the source BS sending said SCH configuration information to the target/receiving BS in a handoff.

Iguchi describes of the source BS sending SCH configuration information to the target/receiving BS in a handoff (fig. 8, "Resource parameter readout" request and response and "Extended Handoff Resource" request and response; paragraphs 94 and 97).

It would have been obvious to one of ordinary skill in the art at the time of invention to specify the transmission of SCH configuration information between the source and target BS within the system of Rezaiifar.

The motivation for combining the teachings is that by providing such information, it "achieve efficient use of channels assigned with a variable bandwidth, such as SCH, in a mobile communications system", (Iguchi, paragraph 13).

**Regarding claims 25, 31 and 33**, Rezaiifar, Kumar and Iguchi describe all limitations as set forth in claims 24, 30 and 32 respectively.

Iguchi further describes the SCH configuration information comprising the forward data rate (paragraph 95, F-Sch set rate).

2. **Claims 23 and 29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rezaiifar in view of Iguchi as applied to claim 22, and further in view of Abrol (US 2002/0141370).

Rezaiifar and Iguchi combined fail to describe that the source base station activates a non-retransmission mode of Radio Link Protocol (RLP) in the source base station and in the target base station.

Abrol describes a source base station (BS) activating a non-retransmission mode of RLP for itself (source BS) and in the target BS (paragraph 9, where the modified RLP 'SRLP' protocol which deploys non-retransmission mode is determined to be used between the [source] BS and MS before and after a handoff, effectively making the source BS activating the MS and the target BS a non-transmission mode).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to describe the one BS activating itself and another BS to use RLP in a non-retransmission mode as in Abrol for the BS's described by Rezaiifar and Iguchi combined.

The motivation for combining the teachings is that it minimizes that transmission delay (Abrol, paragraph 9).

3. **Claim 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rezaiifar in view of Iguchi as applied to claim 24 above, and further in view of Ahmed (6,947,398).

Rezaifar and Iguchi combined lack what Ahmed describes: sending Radio Link Protocol (RLP) configuration information from the source BS (direct network node) controller to the target BS (anchor node) controller (col. 20, lines 44-46, "It is to be appreciated that tunneling can be used to transport RLP frames between the anchor and the direct network nodes involved in soft handoff", where RLP frames inherently includes configuration information such as L\_V(S) (i.e. current frame sequence #) and L\_V(R) (next frame sequence #) as per IS-707).

It would have been obvious to one of ordinary skill in the art at the time of invention to forward the RLP configuration information (via RLP frames) from the source BS to the target BS in soft handoffs as in Ahmed for the combined apparatus of Rezaifar, Kumar and Iguchi.

The motivation for combining the teachings is that during soft handoff, the target BS may compare the quality between identical frame payload received by itself and by the source BS and "select the best of the received packets according to some quality metric and then forwards them to the remote node [destination]", (Ahmed, col. 20 lines 33-36).

4. **Claim 27** is rejected under 35 U.S.C. 103(a) as being unpatentable over Rezaifar in view of Iguchi and Ahmed as applied to claim 26 above, and further in view of Wadin (5,329,635).



Rezaiifar, Iguchi and Ahmed combined fail to describe that the handoff on SCH from source BS to target BS starting at a selected RLP frame identified in the RLP configuration information.

Wadin describes that the handoff on SCH from source BS to target BS starting at a selected RLP frame identified in the RLP configuration information, (col. 1, lines 67-68, where during a handoff the target BS will "(2) commencing to transmit in the [selected RLP] frame immediately following the last transmit [RLP] frame of the first base", where per IS-707, the RLP frame contains L\_V(R), the next (selected) frame sequence number).

It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the starting selected RLP frames in performing handoff from source to target BS.

The motivation being that this method provides a seamless handoff by removing "an audible 'seam' would occur when the line is re-established", col. 1, lines 23-25).

5. Claims 34-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rezaiifar in view of Iguchi, Abrol, Ahmed and Wadin.

**Regarding claim 34,** Rezaiifar describes a wireless network communications system comprising a mobile station MS, a source base station BS and s target BS communicating with each other (fig. 1 & 5, and col. 13, lines 12-25 and col. 14, lines 14, lines 50-67, where BS 4d (source BS) communicates with a MS 6i and to BS 4e (target BS) via the BSC regarding intercell delta power levels for a supplemental channel soft

handover), a method for handling off a high speed packet data HSPD (col. 8, lines 14-16) from the source base station (fig. 5A, 'A') to the target base station (fig. 5B, BS 'C') (col. 13, lines 22-25), comprising:

providing the source BS configured to generate a handoff message containing supplemental channel configuration information about said supplemental channel being used by said mobile station (fig. 1 & 5, col. 13, lines 21-25 and col. 14, lines 50-64, BS 'A' (source BS) hands off the supplemental channel transmission/call to BS 'C' (target BS) in accordance to the inter-cell delta power levels (handoff required message) forwarded (generated) by the base stations 4 to the BSC 10, including the source base station. In addition, Rezaiifar incorporates by reference US 5,903,554 which incorporates by reference US 5,101,501, "Method and System for Providing a Soft Handoff in communication in a CDMA Cellular Telephone System", col. 8, lines 35-46, which describes that a control message is sent by a mobile to the current cell site then to a BSC for a mobile-initiated handoff to other cells 12 or 14);

Rezaiifar fails to explicitly describe that the inter-cell delta power message being a "handoff required" message.

However, it is obvious that each the messages, including the inter-cell delta power message, as described in Rezaiifar reference are needed (required) for the SCH soft handoff; they are not optional messages. Hence the "handoff message" of Rezaiifar is a "handoff required" message.

Rezaiifar fails to describe:

providing the target base station is configured to determine whether said target base station is able to support said high speed packet data call based on said supplemental channel configuration information, wherein said source base station is further configured to hand off said high speed packet data call on said supplemental channel to said target base station during said high speed packet data call subsequent to said target base station determining that said target base station is bale to support said high speed packet data call.

Iguchi describes:

providing the target base station configured to determine whether said target base station is able to support said high speed packet data call based on said supplemental channel configuration information (para. 87-88 & 97-99, BTS 3 (target BS) determines the set (support) rate  $Y$  ( $\leq$  requested Sch rate  $X$ ) within the handoff resource response in the F-Sch setup), wherein said source base station is further configured to hand off said high speed packet data call on said supplemental channel to said target base station during said high speed packet data call subsequent to said target base station determining that said target base station is able to support said high speed packet data call (para. 98-99, when  $Y=X$ , BTS 2 (source BS) is hand off the full Sch to BTS 3 (target BS)), wherein said source base station is further configured to hand off said high speed packet data call on said supplemental channel to said target base station during said high speed packet data call subsequent to said target base station determining that said target base station is able to support said high speed

packet data call (para. 98-99, when  $Y=X$ , BTS 2 (source BS) is hand off the full Sch to BTS 3 (target BS)).

Iguchi also describes of the source BS sending SCH configuration information to the target BS in a handoff (fig. 8, "Resource parameter readout" request and response and "Extended Handoff Resource" request and response; paragraphs 94 and 97).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to have the target BS determine if high speed packet data call is supported and subsequently the call is to transferred from the source BS to the target BS as in Iguchi for the system of Rezaiifar.

The motivation for combining the teachings is that it allows a method to determine the Sch bandwidth supported during a Sch handover (Iguchi, para. 10).

Rezaiifar fails to describe that the source BS activates a non-retransmission mode of Radio Link Protocol (RLP) in the source base station and in the target base station.

Abrol describes a (source) BS activating a non-retransmission mode of RLP itself (source BS) and in another target BS (paragraph 9, where the modified RLP 'SRLP' protocol which deploys non-retransmission mode is determined to be used between the itself and MS before and after a handoff, effectively making the source BS activating the MS and the target BS a non-transmission mode).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to describe the one BS activating itself and another BS to use RLP in a non-retransmission mode as in Abrol for the BS's described by combined.

The motivation for combining the teachings is that it minimizes that transmission delay (Abrol, paragraph 9).

Rezaifar, Iguchi and Abrol lack what Ahmed describes: sending Radio Link Protocol (RLP) configuration information from the source BS (direct network node) to the target BS (anchor node) (col. 20, lines 44-46, "It is to be appreciated that tunneling can be used to transport RLP frames between the anchor and the direct network nodes involved in soft handoff", where RLP frames including configuration information as noted in applicant's specification, p. 28, lines 21-23 and p. 29, lines 1-13).

It would have been obvious to one of ordinary skill in the art at the time of invention to forward the RLP frames (with RLP configuration information) from the source BS to the target BS in soft handoffs.

The motivation for combining the teachings is that during soft handoff, the target BS can compare the quality between identical frame payload received by itself and by the source BS and "select the best of the received packets according to some quality metric and then forwards them to the remote node [destination]", (Ahmed, col. 20 lines 33-36).

Rezaifar, Iguchi, Abrol, and Ahmed lack what Wadin describes: handoff on SCH from source BS to target BS starting at a selected RLP frame identified in the RLP configuration information, (col. 1, lines 67-68, where during a handoff the target BS will "(2) commencing to transmit in the [selected RLP] frame immediately following the last transmit [RLP] frame of the first base", where per IS-707, the RLP frame contains L\_V(R), the next (selected) frame sequence number).

It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the starting selected RLP frames in performing handoff from source to target BS.

The motivation for combining the teachings is that it provides a seamless handoff by removing "an audible 'seam' would occur when the line is re-established", col. 1, lines 23-25).

**Regarding claims 35 and 37**, Rezaiifar, Iguchi, Abrol, Ahmed and Wadin describes all limitations as set forth in claim 34.

Rezaiifar further describes that the source/target BS (fig. 2, #4) comprises a packet data handoff controller (fig. 2, #44,46).

**Regarding claims 36 and 38**, Rezaiifar, Abrol, Iguchi, Ahmed and Wadin describes all limitations as set forth in claim 35 and 37 respectively.

Iguchi further describes the SCH configuration information comprising the forward data rate (paragraph 95, F-Sch set rate).

6. Claim 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rezaiifar in view of Iguchi, Abrol, Ahmed and Wadin as applied to claim 14 above, and further in view of the IS-95 CDMA and cdma2000 text.

**Regarding claim 39**, Rezaiifar, Iguchi, Kumar, Abrol, Ahmed and Wadin describe all limitations as set forth in claim 14.

Rezaiifar, Iguchi, Abrol, Ahmed and Wadin further describes:

sending a Handoff Required (Handoff Request) message from MS, via source BS, to BSC/MSC (Iguchi, fig. 8, "Pilot Strength Measurement" message, as clarified by the IS-95 CDMA and cdma2000 text, fig. 10-8, which becomes the "Handoff Request Message"), where the message includes the SCH configuration information and Ahmed's RLP configuration information;

sending a Handoff Request message from MSC to the target BS (Iguchi, fig. 8, "Extended Handoff Resource Request"), where the message includes the SCH configuration information and Ahmed's RLP configuration information;

sending a Handoff Request Acknowledgment message from the target MS to the BSC/MSC (Iguchi, fig. 8, "Extended Handoff Resource Response") in accepting the SCH (HSPD call);

connecting the target BS to a PSDN node to receive the HSPD call (applicant's prior art, p.6, lines 4-9,)

handing off the SCH (with HSPD call) from source BS to target BS (Rezaiifar, fig. 5A, 'A', col. 8, lines 14-16 & col. 13, lines 22-25);

receiving in the target BS the HSPD call on the SCH starting at a selected RLP frame provided from the (previous) RLP configuration information, (Wadin, col. 1, lines 67-68, "commencing to transmit in the frame immediately following the last transmit frame of the first base.")

**Regarding claim 40**, Rezaiifar, Iguchi, Abrol, Ahmed and Wadin describe all limitations as set forth in claim 39.

Rezaiifar, Kumar, Abrol, Ahmed and Wadin further describe:

sending a Handoff Command Message from the BSC/MS to the source BS to cause the HSPD call (SCH) to be handed off to the target BS, and sending (continuing to forward) from the source BS to the MS a Handoff Direction Message to inform the MS of the HSPD handoff to the target BS (Iguchi, fig. 9, "Universal Handoff Direction Message").

### ***Response to Arguments***

7. Applicant's arguments with respect to claims 21-40 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of



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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Warner Wong whose telephone number is 571-272-8197. The examiner can normally be reached on 6:30AM - 3:00PM, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on 571-272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Warner Wong  
Examiner  
Art Unit 2616

WW

KWANG BIN YAO  
SUPERVISORY PATENT EXAMINER

